

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An earthquake prediction method ~~wherein~~comprising:
observing magnetic field vectors of magnetic fields within an observation area;
estimating telluric current induction field vectors and telluric currents ~~are estimated~~ based on vector differences between the observed magnetic field vectors of magnetic fields that are ~~observed within an observation area~~ and a geomagnetic vector; and
collating and comparing a change over time of the estimated telluric currents and a state of the estimated telluric currents within said the observation area ~~are compared and collated with~~
, with past patterns of change over time of ~~the~~ telluric currents and a state of the telluric currents;
and
~~to estimate~~estimating a seismofocal zone, time of occurrence, and seismic intensity of a seismic event based on the comparison.

2. (currently amended): ~~The~~ An earthquake prediction method according to claim 1,
~~wherein~~further comprising:
eliminating a magnetic field noise component at observation points ~~is eliminated~~ from observed magnetic fields;

finding an amount of divergence of between a direction of a magnetic fields ~~from a~~
~~direction of true north at observation points from which said magnetic field noise component has~~
been eliminated ~~is found~~ and a direction of true north; and

estimating said telluric current induction field vectors ~~are estimated~~ based on vector
differences between observed magnetic field vectors from which said magnetic field noise
component has been eliminated and a geomagnetic vector that has been corrected to true north.

3. (currently amended): The ~~An~~ earthquake prediction method according to claim 2,
wherein estimating telluric current induction field vectors and telluric currents comprises:

plotting said estimated telluric current induction field vectors ~~are plotted~~ on a map; and
estimating said telluric currents ~~are estimated by both~~ joining points on the map at which
geomagnetic abnormalities are recognized and applying Ampere's right-handed screw rule.

4. (currently amended): The ~~An~~ earthquake prediction method according to claim 1,
wherein estimating telluric current induction field vectors and telluric currents comprises:

plotting said estimated telluric current induction fields ~~are plotted~~ on a map; and
estimating a seismofocal zone at an area in which said estimated telluric currents are
~~concentrated is estimated to be a seismofocal zone.~~

5. (currently amended): ~~An~~ The earthquake prediction method according to claim ~~14~~,
~~wherein~~ further comprising:

gathering past data of telluric current induction field intensities of ~~said the estimated~~
seismofocal zone ~~that has been estimated in claim 4 are gathered and;~~

generating a telluric current induction field intensity change pattern that indicates change
over time ~~is generated; and~~

collating and comparing the telluric current induction field density change pattern ~~this~~
~~pattern is then compared and collated with past telluric current induction field intensity change~~
patterns that have been stored; and

~~to estimate~~ estimating said time of occurrence and seismic intensity of a seismic event.

6. (currently amended): An earthquake prediction system ~~that uses the earthquake~~
~~prediction method according to claim 1; said earthquake prediction system comprising:~~

~~mobile telephones or mobile units such as vehicles or ships, each unit carrying a plurality~~
of mobile units which move within an observation area, each mobile unit comprising:

a magnetic force line sensor which determines and outputs ~~for supplying as output~~
magnetic field data indicating ~~that indicate~~ a direction and intensity of lines of magnetic
force;

a GPS position detector ~~for receiving~~ which receives radio waves of a GPS
satellite and output ~~supplying as output~~ position data that ~~indicate~~ indicates position; and

a data transmitter ~~for transmitting said data~~ which transmits the magnetic field data
and the position data; and

~~an earthquake prediction center for collecting said data of various points that are transmitted by said mobile units or said mobile telephones that travel within an observation area and then implementing earthquake prediction~~which receives the magnetic field data and the position data from the plurality of mobile units and which predicts earthquakes based on the received data;

wherein each of the plurality of mobile units is one of a mobile telephone, a vehicle, or a ship.

7. (currently amended): ~~An~~The earthquake prediction system according to claim 6, said wherein the earthquake prediction center comprises~~comprising~~:

a data receiver ~~for receiving data that have been transmitted from said mobile telephones or said mobile units by way of a communication network and antenna~~which receives data from the plurality of mobile units via a communication network;

a data storage unit ~~for retaining and storing various data such as map data and data that have been~~which stores the data received by said data receiver;

a telluric current induction field estimation unit ~~for estimating~~which telluric current induction fields based on map data and data that ~~have~~has been ~~retained and~~ stored in said data storage unit;

a telluric current estimation unit ~~for estimating~~which estimates telluric currents based on ~~said the estimated~~ telluric current induction fields ~~that have been estimated;~~

a telluric current induction field intensity change pattern generation unit ~~for accumulating~~which accumulates transitions over time of said telluric current induction field intensities and ~~then generating~~which generates change patterns based on the accumulated transitions of telluric current induction field intensities; and

an earthquake prediction unit ~~for analyzing~~which analyzes ~~said the estimated~~ telluric currents ~~that have been estimated~~ and said change patterns of said telluric current induction field intensities ~~to estimate~~, and estimates a seismofocal zone, seismic intensity, and time of occurrence of a seismic event based on the analysis.

8. (currently amended): An earthquake prediction system according to claim 6, wherein, at least one of the plurality of mobile units is a vehicle and the GPS position detector of the vehicle comprises a car navigation system~~when said mobile unit is provided with a car navigation system, position data of said car navigation system is used instead of data from said GPS position detector.~~

9. (currently amended): An earthquake prediction system comprising:

a plurality of units, each unit comprising:

a magnetic force line sensor which determines and outputs magnetic field data indicating a direction and intensity of lines of magnetic force; and

a data transmitter which transmits the magnetic field data and position data; and

an earthquake prediction center which receives the magnetic field data and the position data from the plurality of mobile units and which predicts earthquakes based on the received data;

~~An earthquake prediction system according to claim 6, wherein:~~

~~said magnetic force line sensor and communication equipment are installed in~~wherein at least one of the plurality of units comprises a preselected existing fixed structures within the an
observation area; and

~~said communication equipment transmits magnetic field data output of said magnetic force line sensor and information indicating installation positions~~data transmitter transmits the magnetic field data and position data to said earthquake prediction center by way of an existing communication network.

10. (currently amended): An earthquake prediction system according to claim 6,
wherein:

at least one of said mobile units is a~~said magnetic force line sensor and GPS position detector are incorporated in a mobile telephone or a mobile unit; and~~

~~said mobile telephone~~ which uses its own communication capabilities to transmit observation data to said earthquake prediction center.

11. (currently amended): An earthquake prediction system according to claim 9, wherein each unit further comprises an acceleration sensor ~~is provided~~, and said magnetic field data ~~are~~ is transmitted when said acceleration sensor detects earthquake motion.

12. (currently amended): An earthquake prediction system according to claim 6, wherein each mobile unit further comprises an acceleration sensor ~~is provided~~ and said magnetic field data ~~are~~ is transmitted when said acceleration sensor detects a stationary state of at least a fixed time interval.

13. (currently amended): An earthquake prediction method according to claim 2, wherein:

said magnetic field noise component is a change in magnetic field that is observed at fixed time intervals at a fixed observation point; and

eliminating said magnetic field noise component ~~is eliminated by~~ comprises analyzing characteristics of a pattern of ~~this~~ the change in magnetic fields that is observed at fixed time intervals as a fixed observation point and ~~then~~ extracting the magnetic field noise component from observed magnetic fields.

14. (currently amended): An earthquake prediction method according to claim 2, wherein estimating said telluric currents comprises using ~~are estimated by means of~~ Ampere's

right-handed screw rule based on said estimated telluric current induction field vectors of a plurality of points.

15. (currently amended): An earthquake prediction method according to claim 14², wherein estimating said telluric currents ~~are estimated by means of~~ comprises using Ampere's right-handed screw rule based on said estimated telluric current induction field vectors of a plurality of points that form a loop.